[6450-01-P]

DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[Case No. RF-024]

Decision and Order Granting a Waiver to LG Electronics, Inc. from the Department of Energy Residential Refrigerator and Refrigerator-Freezer Test Procedures

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Decision and Order.

SUMMARY: The U.S. Department of Energy (DOE) gives notice of the decision and order (Case No. RF-024) that grants to LG Electronics, Inc. (LG) a waiver from the DOE electric refrigerator and refrigerator-freezer test procedures for determining the energy consumption of residential refrigerator-freezers for the basic models set forth in its petition for waiver. Under today's decision and order, LG shall be required to test and rate its refrigerator-freezers with dual compressors using an alternate test procedure that takes this technology into account when measuring energy consumption.

DATES: This Decision and Order is effective **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

FOR FURTHER INFORMATION CONTACT: Mr. Bryan Berringer, U.S. Department of Energy, Building Technologies Program, Mail Stop EE-2J, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-0371. E-mail: Bryan.Berringer@ee.doe.gov.

Ms. Elizabeth Kohl, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-71, 1000 Independence Avenue, SW., Washington, DC 20585-0103, (202) 586-7796, E-mail: Elizabeth.Kohl@hq.doe.gov.

SUPPLEMENTARY INFORMATION: DOE gives notice of the issuance of its decision and order as set forth below. The decision and order grants LG a waiver from the applicable residential refrigerator and refrigerator-freezer test procedures found in 10 CFR part 430, subpart B, appendix A1 for certain basic models of refrigerator-freezers with dual compressors, provided that LG tests and rates such products using the alternate test procedure described in this notice. Today's decision prohibits LG from making representations concerning the energy efficiency of these products unless the product has been tested consistent with the provisions and restrictions in the alternate test procedure set forth in the decision and order below, and the representations fairly disclose the test results. Distributors, retailers, and private labelers are held to the same standard when making representations regarding the energy efficiency of these products.

Issued in Washington, DC, on March 19, 2013.

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Kathleen B. Hogan
Deputy Assistant Secretary for Energy Efficiency
Energy Efficiency and Renewable Energy

Decision and Order

In the Matter of: LG Electronics, Inc. (Case No. RF-024)

I. *Background and Authority*

Title III, Part B of the Energy Policy and Conservation Act of 1975 (EPCA), Pub. L. 94-163 (42 U.S.C. 6291-6309, as codified) established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances, which includes the residential electric refrigerators and refrigerator-freezers that are the focus of this notice.[1] Part B includes definitions, test procedures, labeling provisions, energy conservation standards, and the authority to require information and reports from manufacturers. Further, Part B authorizes the Secretary of Energy to prescribe test procedures that are reasonably designed to produce results which measure energy efficiency, energy use, or estimated operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)) The test procedure for residential electric refrigerators and refrigerator-freezers is set forth in 10 CFR part 430, subpart B, appendix A1.

DOE's regulations for covered products contain provisions allowing a person to seek a waiver from the test procedure requirements for a particular basic model for covered consumer products when (1) the petitioner's basic model for which the petition for waiver was submitted contains one or more design characteristics that prevent testing according to the prescribed test procedure, or (2) when prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics as to provide materially inaccurate comparative data. 10 CFR 430.27(a)(1). Petitioners must include in their petition any

[1] For editorial reasons, upon codification in the U.S. Code, Part B was re-designated Part A.

alternate test procedures known to the petitioner to evaluate the basic model in a manner representative of its energy consumption characteristics.

The Assistant Secretary for Energy Efficiency and Renewable Energy (the Assistant Secretary) may grant a waiver subject to conditions, including adherence to alternate test procedures. 10 CFR 430.27(l). Waivers remain in effect pursuant to the provisions of 10 CFR 430.27(m).

Any interested person who has submitted a petition for waiver may also file an application for interim waiver of the applicable test procedure requirements. 10 CFR 430.27(a)(2). The Assistant Secretary will grant an interim waiver request if it is determined that the applicant will experience economic hardship if the interim waiver is denied, if it appears likely that the petition for waiver will be granted, and/or the Assistant Secretary determines that it would be desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver. 10 CFR 430.27(g).

II. *LG's Petition for Waiver: Assertions and Determinations*

On May 10, 2012, LG filed a petition for waiver from the test procedure applicable to residential electric refrigerators and refrigerator-freezers set forth in 10 CFR Part 430, subpart B, appendix A1. On June 28, 2012, LG amended its request by revising the list of particular models covered by its request. The May 2012 request initially covered a number of LG and Kenmore-branded products; the June 2012 request revised this list to include only certain LG models. LG

requested a waiver because it is developing new refrigerator-freezers that incorporate a dual compressor design that is not contemplated under DOE's test procedure. In its petition, LG requested a waiver from the existing DOE test procedure applicable to refrigerators and refrigerator-freezers under 10 CFR Part 430 for LG's dual compressor products. LG stated that its dual compressor products use shared compressor systems that are controlled by a 3-way valve. This type of system, LG argued, differs from the independent, sealed systems that the DOE test procedure is designed to address. In its petition, LG set forth an alternate test procedure and noted in support of its petition that DOE has already granted Sub-Zero a similar waiver pertaining to the use of dual compressor-equipped refrigerators. See 76 FR 71335 (November 17, 2011) (interim waiver) and 77 FR 5784 (February 6, 2012) (Decision and Order). DOE did not receive any comments on the LG petition.

III. *Consultations with Other Agencies*

DOE consulted with the Federal Trade Commission (FTC) staff concerning the LG petition for waiver. The FTC staff did not have any objections to granting a waiver to LG.

IV. *Conclusion*

After careful consideration of all the material that was submitted by LG and consultation with the FTC staff, it is ordered that:

(1) The petition for waiver submitted by LG Electronics, Inc. (Case No. RF-024) is hereby granted as set forth in the paragraphs below.

(2) LG shall be required to test and rate the following LG models according to the alternate test procedure set forth in paragraph (3) below.

LG Brand

LFX32955**
LFX33955**
LFX34955**
LMX32955**
LMX33955**
LMX34955**

(NOTE: Each "*" represents a letter.)

(3) LG shall be required to test the products listed in paragraph (2) above according to the test procedures for electric refrigerator-freezers prescribed by DOE at 10 CFR part 430, appendix A1, except that, for the LG products listed in paragraph (2) only, replace the multiple defrost system, section 5.2.1.4 of appendix A1, with the following:

5.2.1.4 Dual Compressor Systems with Dual Automatic Defrost. The two-part test method in section 4.2.1 must be used, and the energy consumption in kilowatt-hours per day shall be calculated equivalent to:

$$ET = (1440 \text{ x } EP1/T1) + \sum_{i=1}^{D} [(EP2_i - (EP1 \text{ x } T2_i/T1)) \text{ x } (12/CT_i)]$$

Where:

1440 = number of minutes in a day;

ET is the test cycle energy (kWh/day);

i is the variable that can equal to 1, 2 or more that identifies the compartment with distinct defrost system;

D is the total number of compartments with distinct defrost systems;

EP1 is the dual compressor energy expended during the first part of the test (it is calculated for a whole number of freezer compressor cycles at least 24 hours in duration and may be the summation of several running periods that do not include any precool, defrost, or recovery periods);

T1 is the length of time for EP1 (minutes);

EP2i is the total energy consumed during the second (defrost) part of the test being conducted for compartment i (kWh);

T2i is the length of time (minutes) for the second (defrost) part of the test being conducted for compartment i; and

CTi is the compressor on time between defrosts for only compartment i. CTi for compartment i with long time automatic defrost system is calculated as per 10 CFR Part 430, subpart B, appendix A1 clause 5.2.1.2. CTi for compartment i with variable defrost system is calculated as per 10 CFR part 430 subpart B appendix A1 clause 5.2.1.3. (hours rounded to the nearest tenth of an hour).

Stabilization:

The test shall start after a minimum 24 hours stabilization run for each temperature control setting.

Steady State for EP1:

The temperature average for the first and last compressor cycle of the test period must be within 1.0 [degrees] F (0.6 [degrees] C) of the test period temperature average for each compartment. Make this determination for the fresh food compartment for the fresh food compressor cycles closest to the start and end of the test period. If multiple segments are used for test period 1, each segment must comply with above requirement.

Steady State for EP2i:

The second (defrost) part of the test must be preceded and followed by regular compressor cycles. The temperature average for the first and last compressor cycle of the test period must be within 1.0 [degrees] F (0.6 [degrees] C) of the EP1 test period temperature average for each compartment.

Test Period for EP2i, T2i:

EP2i includes precool, defrost, and recovery time for compartment i, as well as sufficient dual compressor steady state run cycles to allow T2i to be at least 24 hours. The test period shall start at the end of a regular freezer compressor on-cycle after the previous defrost occurrence (refrigerator or freezer). The test period also includes the target defrost and following regular freezer compressor cycles, ending at the end of a regular freezer compressor on-cycle before the next defrost occurrence (refrigerator or freezer). If the previous condition does not meet 24 hours time, additional EP1 steady state segment data could be included. Steady state run cycle data can be utilized in EP1 and EP2i.

Test Measurement Frequency Measurements shall be taken at regular intervals not exceeding 1 minute.

[End of 5.2.1.4]

(4) Representations. LG may make representations about the energy use of its dual

compressor refrigerator-freezer products for compliance, marketing, or other purposes only to the extent that such products have been tested in accordance with the provisions outlined above and such representations fairly disclose the results of such testing.

(5) This waiver shall remain in effect consistent with the provisions of 10 CFR 430.27(m).

(6) This waiver is issued on the condition that the statements, representations, and documentary materials provided by the petitioner are valid. DOE may revoke or modify this waiver at any time if it determines the factual basis underlying the petition for waiver is incorrect, or the results from the alternate test procedure are unrepresentative of the basic models' true energy consumption characteristics.

(7) This waiver applies only to those basic models set out in LG's May 10, 2012 petition for waiver. Grant of this waiver does not release a petitioner from the certification requirements set forth at 10 CFR part 429.

Issued in Washington, DC, on March 19, 2013.

Kathleen B. Hogan
Deputy Assistant Secretary for Energy Efficiency
Energy Efficiency and Renewable Energy

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